

October 26, 2004

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of)	Docket Nos. 50-327
Tennessee Valley Authority)	50-328

**SEQUOYAH NUCLEAR PLANT (SQN) - ANNUAL ENVIRONMENTAL
OPERATING REPORT**

The enclosure contains the Annual Environmental Operating Report for SQN for the period from October 1, 2003, through September 30, 2004. This report is submitted in accordance with Appendix B of the SQN Operating License, Section 5.4.1.

Please direct questions concerning this issue to me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,

Original signed by

P. L. Pace
Manager, Site Licensing
and Industry Affairs

Enclosure

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PLP:JDS:JWP:KTS

Enclosure

cc (Enclosure):

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ENCLOSURE

ANNUAL NON-RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

**TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT
October 1, 2003 through September 30, 2004**

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I. INTRODUCTION

The Sequoyah Nuclear Plant Annual Non-Radiological Environmental Operating Report for the period of October 1, 2003 through September 30, 2004 is prepared in accordance with Environmental Technical Specifications (Non-Radiological) (ETS), Appendix B, Section 5.4.1. This report includes a summary of:

- A. Reporting for those programs not concerned with water quality or protection of aquatic biota, which are regulated by the Clean Water Act
- B. Environmental monitoring performed
- C. Reports previously submitted as specified in the SQN National Pollutant Discharge Elimination System (NPDES) Permit No. TN0026450
- D. ETS noncompliances and the corrective actions for remediation
- E. Changes made to applicable State and Federal permits and certifications
- F. Changes in station design that could involve a significant environmental impact or change the findings of the Final Environmental Statement (FES)
- G. Nonroutine reports submitted per ETS Section 4.1
- H. Special studies
- I. Changes in approved ETS

Reporting, monitoring, and inspections conducted as required by permits and regulations indicated no adverse impact on the environment as a result of station operation.

II. REPORTING FOR THOSE PROGRAMS NOT CONCERNED WITH WATER QUALITY OR PROTECTION OF AQUATIC BIOTA, WHICH ARE REGULATED BY THE CLEAN WATER ACT

- A. Third Quarter 2003 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on October 6, 2003
- B. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on October 7, 2003
- C. Annual Asbestos Removal Notification - submitted to Hamilton County Air Pollution Control Bureau on November 14, 2003
- D. Fourth Quarter 2003 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on January 8, 2004
- E. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on January 9, 2004
- F. Waste Stream 34 revision - submitted to the Tennessee Department of Environment and Conservation on January 20, 2004
- G. Signatory Authority change from Environmental Supervisor to Principal Environmental Engineer – submitted to Hamilton County Air Pollution Control Bureau, Hamilton County Emergency Services, Tennessee Department of Environment and Conservation, and Tennessee Emergency Response Commission on January 29, 2004
- H. Air Permit revision applications to increase sulfur content of the fuel burned- submitted to the Hamilton County Air Pollution Control Bureau on February 20, 2004
- I. Tier Two Emergency and Hazardous Chemical Inventory - submitted to Hamilton

- County Emergency Services and the Tennessee Emergency Response Commission on February 23, 2004
- J. Annual Hazardous Waste Activity Report for 2003 - submitted to the Tennessee Department of Environment and Conservation on February 26, 2004
 - K. Sequoyah Nuclear Plant Hazardous Waste Minimization Plan - maintained on file at Sequoyah since March 1, 2004
 - L. First Quarter 2004 Report on Nonscheduled Removal of Asbestos Containing Material - submitted to the Hamilton County Air Pollution Control Bureau on April 1, 2004
 - M. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on April 1, 2004
 - N. Sequoyah Nuclear Plant Annual Report on The Hours of Operation for The Auxiliary Boilers A&B; Emergency Diesel Generators 1-A, 1-B, 2-A & 2-B; The Security Diesel Generators; The High Pressure Fire Pump Diesel Generator; and The Information Services Backup Power Supply Diesel Generator - submitted to the Hamilton County Air Pollution Control Bureau on April 27, 2004
 - O. Notification of change of SQN Site Vice President from Richard Purcell to J. Randy Douet – submitted to Hamilton County Air Pollution Control Bureau, Hamilton County Emergency Services, Tennessee Department of Environment and Conservation, and Tennessee Emergency Response Commission on May 28, 2004
 - P. Microcomputer Diskette containing Toxic Chemical Release Information CY2003 Required by Emergency Planning and Community Right to Know Act - submitted to the Environmental Protection Agency EPCRA Reporting Center and Tennessee Department of Environment and Conservation on June 22, 2004
 - Q. Written Annual Document Log of PCBs and PCB Items for Calendar Year 2003 - maintained on file since July 1, 2004
 - R. Second Quarter 2004 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on July 1, 2004
 - S. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on July 1, 2004
 - T. Testing of Backflow Prevention Devices at SQN - submitted to the Hixson Utility District on July 6, 2004
 - U. Demolition/Removal Permit Application for Auxiliary Cooling Towers – submitted to the Hamilton County Air Pollution Control Bureau on August 30, 2004
 - V. 2004 Solid Waste Facility Annual Report/Fee - submitted to the Tennessee Department of Environment and Conservation on September 21, 2004
 - W. Air Permit revision applications to add Blackout Diesel Fire Pump and Blackout Diesel Generators 1 and 2 - submitted to the Hamilton County Air Pollution Control Bureau on September 21, 2004.

III. ENVIRONMENTAL MONITORING PERFORMED

- A. Storm water samples taken at required frequencies and Best Management Practices implemented as required by General Industrial Storm Water Discharge Permit TNR050015
- B. Semi-annual facility inspections as required by General Industrial Storm Water Discharge Permit TNR050015
- C. Inspections as required by Storm Water Discharges associated with Construction

- Activity Tracking No. TNR110229 effective May 1, 2003 through October 6, 2003
- D. Outfall sampling and inspection is performed as required by NPDES General Industrial Discharge Permit TN0026450 (results previously submitted to NRC as required)
 - E. Weekly erosion and sediment control inspections are conducted as required by General Industrial Storm Water Discharge Permit TNR050015
 - F. Weekly tank, piping, and secondary containment inspections are performed as required by General Industrial Storm Water Discharge Permit TNR050015 and the Spill Prevention Controls and Countermeasure Plan
 - G. Weekly hazardous waste inspections conducted as required by 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
 - H. Weekly landfill inspections performed as required by 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
 - I. Daily operational hours of diesel generator operation tracking maintained as required by Federally Enforceable Certificate of Operation No. 4150-10200501-08C
 - J. Diesel fuel recovery trench, extraction, and monitoring well sampling, maintenance and operation conducted as required by the State of Tennessee
 - K. Intake forebay aeration system sampling, maintenance and operation performed as required by the State of Tennessee
 - L. Air emissions inspected weekly for equipment permitted by the Hamilton County Air Pollution Control Bureau
 - M. Refrigeration equipment performance and repairs are tracked weekly to ensure compliance with Title VI of the Clean Air Act
 - N. Waste sampling and characterization as required by 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
 - O. Quarterly PCB transformer inspections as required by 40CFR761
 - P. Daily inspections of leaking PCB transformers as required by 40CFR761
 - Q. Asbestos removal tracking as required by the Hamilton County Air Pollution Control Bureau
 - R. Hazardous waste minimization (such as chemical control and substitution) as required by the Tennessee Rule Chapter 1200, Hazardous Waste Management
 - S. National Environmental Policy Act (NEPA) reviews are conducted to evaluate potential environmental impact of temporary or permanent facility modifications as required by 40CFR1500

IV. REPORTS PREVIOUSLY SUBMITTED AS SPECIFIED IN THE SQN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

The following reports were submitted as specified in the SQN NPDES Permit No. TN0026450, General Industrial Discharge Storm Water Permit No. TNR050015, and Construction Storm Water Permit No. TNR110229:

- A. Construction Storm Water Notice of Termination – submitted to Tennessee Department of Environment and Conservation on October 6, 2003
- B. Monthly Discharge Monitoring Report for September 2003 - submitted to Tennessee Department of Environment and Conservation on October 8, 2003
- C. Monthly Discharge Monitoring Report for October 2003 - submitted to Tennessee Department of Environment and Conservation on November 11, 2003
- D. Monthly Discharge Monitoring Report for November 2003 - submitted to Tennessee Department of Environment and Conservation on December 2, 2003
- E. Monthly Discharge Monitoring Report for December 2003 - submitted to Tennessee Department of Environment and Conservation on January 12, 2004
- F. Monthly Discharge Monitoring Report for January 2004 - submitted to Tennessee Department of Environment and Conservation on February 9, 2004
- G. Multi-Sector Storm Water General Permit 2003 Storm Water Monitoring Report - submitted to Tennessee Department of Environment and Conservation on March 4, 2004
- H. Monthly Discharge Monitoring Report for February 2004 - submitted to Tennessee Department of Environment and Conservation on March 9, 2004
- I. Monthly Discharge Monitoring Report for March 2004 - submitted to Tennessee Department of Environment and Conservation on April 13, 2004
- J. Monthly Discharge Monitoring Report for April 2004 - submitted to Tennessee Department of Environment and Conservation on May 12, 2004
- K. Monthly Discharge Monitoring Report for May 2004 - submitted to Tennessee Department of Environment and Conservation on June 9, 2004
- L. Monthly Discharge Monitoring Report for June 2004 - submitted to Tennessee Department of Environment and Conservation on July 8, 2004
- M. Monthly Discharge Monitoring Report for July 2004 - submitted to Tennessee Department of Environment and Conservation on August 12, 2004
- N. DMR - QA Laboratory Performance Evaluation Study 24 - submitted to Environmental Resource Associates, Tennessee Department of Environment and Conservation, and Environmental Protection Agency on September 1, 2004
- O. Monthly Discharge Monitoring Report for August 2004 - submitted to Tennessee Department of Environment and Conservation on September 13, 2004
- P. Application for Aquatic Resource Alteration Permit (ARAP) General Permit for Maintenance Activities – submitted to Tennessee Department of Environment and Conservation on September 29, 2004

V. ENVIRONMENTAL TECHNICAL SPECIFICATION (ETS) NONCOMPLIANCES

None.

VI. CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS

NPDES Permits: Concurrence was received from the Tennessee Department of Environment and Conservation Division of Water Pollution Control as follows:

SQN has requested a change in the bio-fouling treatment duration to the Tennessee Department of Environment and Conservation (TDEC) in letters dated March 10, 2003 and April 18, 2003. TDEC Division of Water Pollution Control expressed concerns with the proposed SQN changes to the biocide controls that must be implemented to control the zebra mussels and Asiatic clams in the essential raw cooling water (ERCW) and raw cooling water (RCW) systems in a letter dated April 25, 2003. TDEC requested: 1) the change in approach be reflected in the Best Management Practice (BMP) Plan; 2) during periods of continuous chlorination, daily sampling of effluent TRO occur; 3) whole effluent toxicity testing occur during the spring, summer, and fall non-oxidizing biocide treatment periods; and 4) the effluent be analyzed for H-130M using a low detection level analytical method and reported for all treatments with this chemical. SQN evaluated the impact of the April 25, 2003 letter and replied to the State on September 15, 2003 with concerns about reporting of Total Residual Oxidant (TRO). On March 18, 2004, SQN submitted additional information on TRO studies, EPA information, the BMP Plan, and the addition of Biodetergent 73551 to replace CL-363. On June 23, 2004, TVA and the State met to discuss NPDES Permit renewal and the requested chemical treatment changes. On July 16, 2004, the State granted approval of the use of 73551. They also requested that the BMP Plan (renamed by the State a Biocide/Corrosion Treatment Plan – B/CTP) be resubmitted in a standardized format agreed upon by the State and TVA. SQN is in process of revising the B/CTP for the State.

On May 11, 2004, Sequoyah submitted a plant aerial photograph as requested by the State in support of NPDES permit renewal. SQN's NPDES permit expired December 31, 2003. State approval is in process.

VII. CHANGES IN FACILITY DESIGN OR OPERATION

In accordance with Technical Specification 5.3.c, facility design and operational changes were reviewed for potential effect on the environment. This review is completed per Tennessee Valley Authority upper tier instruction IX Environmental Review and implementing Environmental Management System (EMS) procedures Environmental Review Process and Standards and Criteria for Environmental Reviews, in compliance with the National Environmental Policy Act. An evaluation of facility design and operational changes proposed from October 1, 2003 through September 30, 2004 was completed.

A. **Special Tests**

There were no special tests conducted during this period that met environmental impact criteria

B. **Temporary Alterations**

There were no temporary alterations conducted during this period that met environmental impact criteria.

C. **Design and Operational Changes**

The facility design and operational changes made during this reporting period with a potential impact on the environment were found to be within the scope of existing permits and in compliance with environmental regulations. Those changes reviewed are as follows:

Environmental Assessments - None.

Categorical Exclusion Checklists

1. Control of Zebra Mussels at Nuclear Plants
2. Temporary Vehicle Barrier System Relocation for Contractor Parking Lot 2
3. Upgrading the Sudden Pressure Relays for the four Unit 2 Main Bank Transformers and the Common Station Service Transformer A
4. Tactical Paintball Program
5. Fire Tank Control Valves
6. RCW Supply to the Glycol Chillers
7. Gravel in the 500 kV Switchyard
8. Generic SQN Blanket Review
9. Water Treatment Plant Upgrade
10. Spill Prevention Control and Countermeasures (SPCC) Upgrades, Installations, and other Considerations
11. Control Room Temperature Cooling
12. TVAN Vehicle Barrier and Observation Tower Upgrades
13. Security Upgrade – Firing Range
14. Seven Ground Water Well Sites for Tritium Monitoring
15. Development of Advanced Scale Conditioning Agents for Unit 2
16. Replace VHF Radios
17. Central Alarm Station Exterior Upgrades, Delay Fencing, and Delay Barriers
18. TUFFCAT-10 Boom Installation
19. Sally Port Expansion and New Road
20. Blackout Diesel Fire Pump, Blackout Diesel Generators 1 & 2, Dry Transformers
21. Upgrading the Sudden Pressure Relays for the four Unit 1 Main Bank Transformers and the Common Station Service Transformer B
22. AERCW Cooling Tower Demolition/Removal
23. Leading Edge Flow Meter (LEFM) Evaluation

- 24. SQN and WBN Containment Sump
- 25. Replace the Unit 2 Main Bank Transformers
- 26. Diffuser Man Way Cover Replacement Project

VIII. NON-ROUTINE REPORTS

On April 12, 2004, SQN submitted to the Tennessee Department of Environment and Conservation per NPDES permit TN0026450 Part II C.2.a., a non-routine report describing the diversionary flow in the Tennessee River identified on April 7, 2004. It was later determined that the diversionary flow was caused by an unforeseeable breach of one of the diffuser pipe manholes (man ways). The breach was repaired April 8, 2004 by placing a quarter inch thick plate over the manhole opening, placing four pieces of angle iron over the plate, and clamping the angle iron and plate to the existing angle frame. Follow-up letters were submitted on April 13 and 14, 2004 for requested copies of the diffuser drawings and descriptions of Stations 8, 12, 13, and river flow during the breach. To date, SQN has not received a notice of violation from the State on the breach. Long-term repair of all nine manholes is currently scheduled for the U1C13 refueling outage.

IX. SPECIAL STUDIES

There was one environmental study conducted this year. The study titled, "Biological Monitoring of the Tennessee River Near Sequoyah Nuclear Plant Discharge 2003" was performed by TVA Aquatic Biology Laboratory. This report was submitted to the Tennessee Department of Environment and Conservation on June 10, 2004. This study concluded that the Sequoyah operation had no impact on the Chickamauga Reservoir resident fish community, on average, for nine sampling seasons.

X. CHANGES IN APPROVED ENVIRONMENTAL TECHNICAL SPECIFICATION

There were no changes in approved ETSs during this period.